Module 1 - Lecture 5

Command Line Programs

Review

- Arrays
- Loops
- Unary operators and shortcuts

Other Loops

```
while (... condition ...)
{
   // runs while condition is true
}

do
{
   // runs at least once
   // then while condition is true
} while (... condition ...);
```

Other Loops

```
for(<data_type> <variable_name> : <array_of_data_type>)
{
// runs from the start of the array until the end of the
array. Upon each iteration, <variable_name> is populated
with the next element in the array.
}

int[] nums = { 1, 2, 3, 4 };
for(int num : nums)
{
    System.out.println(num);
}
```

That's a lot of ifs!

```
String name = …;
if (name == "Billie") {
    // code here
}
else if (name == "Alex") {
    // code here
}
else if (name == "Skylar") {
    // code here
}
else if (name == "Avery") {
    // code here
}
else {
    // code here
}
```

Use a switch case statement!

```
String name = …;
switch (name) {
    case “Billie”:
        // code here
        break;
    case “Alex”:
        // code here
        break;
    case “Skylar”:
        // code here
        break;
    case “Avery”:
        // code here
        break;
    default:
        // equivalent to else
}
```

Command Line Programs

- Reading in data
- Writing out data
- Parsing data

Packages

- A package is a namespace that organizes a set of related code.
- Conceptually similar to folders on a file system.
- We can create, and have created our own e.g. com.techelevator
- Java also provides A LOT of packages for us to use

Packages cont...

- Our programs, by default, include the package that we define AND the package java.lang.

- java.lang includes things like
  - Arrays,
  - Primitive types
  - Strings
  - System
  - and more...

- What happens when we need to use more of what Java offers?

Importing Packages

- When we wish to use another package of code from Java or another source, we will use an import statement.

Examples of valid import statements:

```
import java.util.Scanner; // imports the Scanner class
import java.util.*; // imports all classes in the java.util subpackage
import static java.lang.Math; // imports static members from the Math class
```

Fully Qualified Packages

- Rather than importing a class, you may instead use its fully qualified name within your code.

- This becomes necessary when you have two packages containing the same class name, and you wish to use that class.

A fully qualified name looks like this:

java.lang.String OR java.util.Scanner

Let's Code!

Equality

- == vs. equals()

Pair exercises!

- TPS Reports
  - Tech Skill
  - Participation
  - Social

Reading

- Module 1
  - Introduction to Objects

QUESTIONS?